

### ABSTRACT

The invention provides an isolated or purified nucleic acid molecule consisting essentially of the nucleotide sequence encoding transductin-2 (TDC2), related and derivative nucleic acid molecules, vectors comprising the isolated or purified nucleic acid sequences, cells comprising such vectors, polypeptides encoded by the nucleic acid molecules, monoclonal antibodies and cell lines producing the monoclonal antibodies. The invention also provides methods of treating, prognosticating and monitoring hearing loss.